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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,664	08/28/2003	Akira Uedono	01165.0906	6918

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Finnegan, Henderson, Farabow,
Garrett & Dunner, L.L.P.
1300 I Street, N.W.
Washington, DC 20005-3315

EXAMINER

SMITH, JOHNNIE L

ART UNIT	PAPER NUMBER
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2881

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/649,664	Applicant(s) UEDONO ET AL.	
	Examiner Johnnie L Smith II	Art Unit 2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 4, 6-14 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1118</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figure 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 4, 6-14, 16-17 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to another claims in the alternative only and/or can not depend from another multiply dependent claim. See MPEP § 608.01(n). Accordingly, the claims 4, 6-14, 16-17 not been further treated on the merits.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title; if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent 5,063,293 (Rich et al). In reference to claim 1, Rich discloses a defect evaluation apparatus, having a source section having a source for generating positrons and a moderator for decelerating the positrons, a sample holding section for holding a sample to be measured, a transfer section for transferring the positrons from the source section to the sample holding section, and detection means for detecting γ rays emitted from the sample being measured (figure 1,

column 13 lines 38-62). Rich further discloses that the apparatus further comprising heating means for heating the moderator, but failed to clearly show protection means protection means for protecting the source from the heating means and heated moderator when the moderator is being heated using the heating means. T would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate such a element, since it is taught in Rich that the moderator system uses a set of tungsten vanes which are annealed at 2500 degrees Celsius and that the source is installed on a titanium window, which is know in the art for having relatively high resistance to heat.

6. In reference to claims 2 and 3, Rich discloses all elements upon which the claims depend but failed to clearly show the apparatus wherein the protection means is disposed outside of the space between the moderator and the source and wherein the heating means faces the moderator when the moderator is heated by the heating means. It would have been an obvious to one of ordinary skill in the art, since applicant has not disclosed that having the protection mean outside the space and the heating means facing the moderator solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the elements as discussed above with respect to Rich et al.

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7. In reference to claim 5, *In re Larson*, 340 F.2d 96_5, 968, 144 USPQ 347, 349 (CCPA 1965) The use of a one piece construction instead of the structure disclosed in prior art would be obvious. Rich discloses all elements upon which the claims depend but failed to clearly show the apparatus wherein the moderator is held by moderator holding means, the moderator holding means and the protection means are integrally formed in a rotatable L-shape body. It would have been obvious to one of ordinary skill in the art at the time of the invention to integrate the holding mean and protection means, since it has been held that making in one piece an article, which has formerly been formed in multiple pieces, involves only routine skill in the art.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by US patent 5,063,293 (Rich et al). In reference to claim 15, Rich shows a defect evaluation apparatus, having a source section having a source for generating positrons and a moderator for decelerating the positrons, a sample holding section

for holding a sample to be measured, a transfer section for transferring the positrons from the source section to the sample holding section, and detection means for detecting rays emitted from the sample being measured (figure 1, column 13 lines 38-62). Rich further discloses wherein the detection means is comprised of two detectors for detecting rays generated by annihilation of positrons and said two ray detectors are arranged facing each other across the sample, said two ray detectors are connected to a circuit for measuring the detection timing for each ray detected by said two ray detectors and for checking whether two rays simultaneously detected by said two ray detectors are two rays simultaneously emitted in opposite directions by the annihilation of one positron incident on the sample, whereby energy spectrums is simultaneously emitted in opposite directions by the annihilation of one positron incident on the sample and detected by said two detectors are measured (column 15 line 36- column 16 line 50, figure 6).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US patents 6,630,666, 5,107,221, 6,635,871, 4,864,131, 5,159,195, 4,740,694, 5,200,619, and US patent publication 2004/0178353. All of

the cited references contain art similar to that being claimed by applicant, more specifically, methods and apparatuses of positron sources.

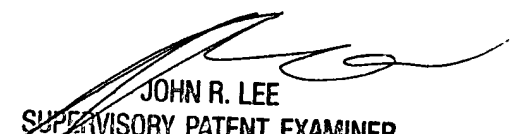
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johnnie L Smith II whose telephone number is 571-272-2481. The examiner can normally be reached on Monday-Thursday 7-4 P.M. and Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R Lee can be reached on 571-272-2477. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JLSII

Johnnie L Smith II
Examiner
Art Unit 2881


JOHN R. LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800